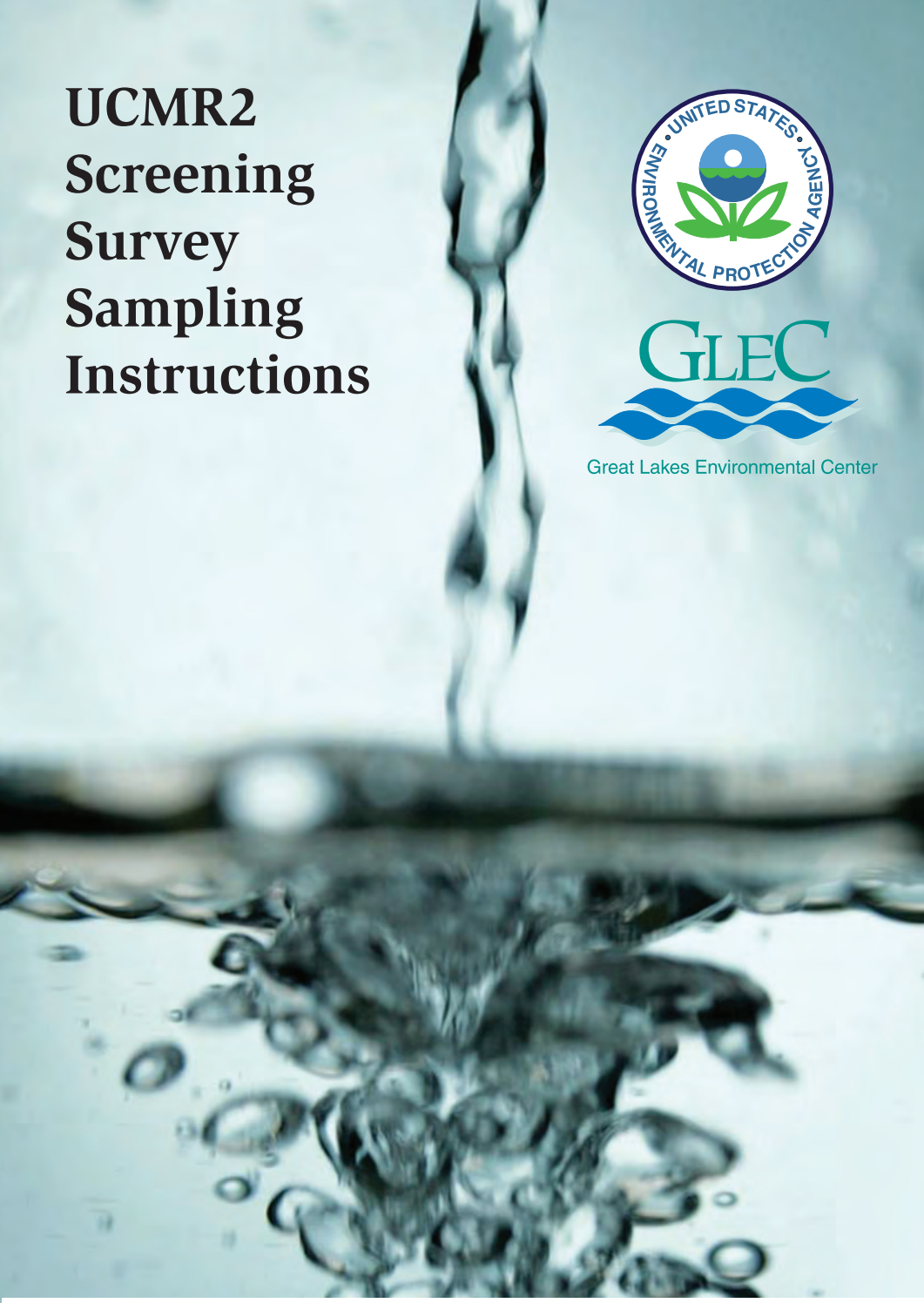
UCMR2 Screening Survey Sampling Instructions



Great Lakes Environmental Center

Please read all of the instructions before sampling.

Introduction

The objective of the second cycle of EPA's Unregulated Contaminant Monitoring Regulation (UCMR2) is to monitor the occurrence compounds that are not federally regulated in drinking water. Great Lakes Environmental Center (GLEC), under contract with EPA, is providing the sample kits for the collection of UCMR2 samples at your facility.

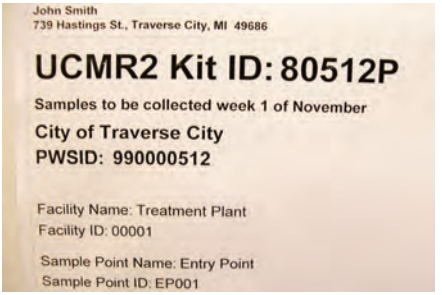
This booklet provides you with step-by-step instructions for completing UCMR2 Screening Survey sample collection at your facility. The sampling procedure is not difficult, but attention to detail is essential. If samples are not properly collected, packed and shipped, you will be required to resample.

About the Sample Kits

- You should receive at least one sample kit for each entry point to a distribution system for each facility and one smaller kit for each maximum residence point in your distribution system(s). (Facilities that do not disinfect, will not receive a distribution kit.) It's possible that you will receive an additional kit for one or more of your sample points. This duplicate kit will provide the laboratory with additional sample volume for quality control purposes.

You should receive at least one sample kit for each entry point (large kit) and one smaller kit for each maximum residence point in your distribution system(s) at your facility.

- Each kit bears a kit label on the side of the box with important information, including the name and address of your facility, a unique kit number, and the specific sample point for the kit. If you have more than one entry point or more than one maximum residence point, it is **very important** that the proper kit is used for each sample point.


John Smith
739 Hastings St., Traverse City, MI 49686

UCMR2 Kit ID: 80512P

Samples to be collected week 1 of November

City of Traverse City
PWSID: 990000512

Facility Name: Treatment Plant
Facility ID: 00001

Sample Point Name: Entry Point
Sample Point ID: EP001

The kit label bears a unique kit number assigned to each sample point at your facility.

Upon Receiving the Sample Kits

- Open one kit at a time. Leave the black, foam cooler and plastic bag in the cardboard box. Simply fold open the plastic to access the top of the cooler.

The cooler and the plastic bag remain in the cardboard box throughout the sampling process. The zip-lock bag contains important documents.

- The zip-lock bag on top of the cooler contains important paperwork. The **Sample Tracking Form** and the **FedEx label** are specific to the kit and must not be mixed up with documents from other kits you have received.

The kit number is printed on the sample tracking form and the FedEx label. These documents must stay with the proper kit.

- Locate the **Kit Checklist** which lists every item that should be in the kit. Remove the cooler lid to locate the various items in your sample kit. Remove the top freeze packs and then the top insert to access the inside of the cooler. Small items are packaged together in the zip-lock bag. As you locate each item, check it in Column #1 of the checklist. If you find that any kit items are missing or broken, please call GLEC immediately.

Questions or Problems?

Call Great Lakes Environmental Center at 231-941-2230. Ask for Erica Schneider.

The top insert in the sample kit is removable. Note the location of the freeze packs included in the kit.

- Note the location of the freeze packs in the cooler. You will be instructed to return the frozen packs to these same locations when packing the samples for shipment to the laboratory.
- Remove all freeze packs from the kits and place them in a freezer for **at least 72 hours prior to collecting the samples.**

IMPORTANT! All freeze packs must be placed in a freezer at least 72 hours prior to sampling.

On the Sampling Day

- Samples must be collected during the week designated on the Sample Tracking Form. Samples should be collected on Monday, Tuesday, Wednesday or, as a last resort, on Thursday. Samples may NOT be collected on Friday, Saturday, or Sunday. If for any reason you cannot collect samples during your specified week, please contact GLEC.

- If your facility does not have daily FedEx pick-up and you cannot deliver the collected samples to a FedEx shipping agent, please contact GLEC for special instructions.

- On the sampling day, check to see that the freeze packs are frozen solid. If they are not, do not collect the samples on that day.

- Collect the samples 1 hour before the time of your FedEx pick-up. If the samples are to be chilled, collect the samples 3-4 hours before your FedEx pick-up. (See the section: Chilling Samples on Page 11.) Allow more time if you have multiple sample points and allow for travel time to and from your distribution point(s).

- If the sample point has an aerator, a hose, or tubing on the tap, remove it prior to sampling. Let the water run for 10 minutes.

If the tap is equipped with an aerator, remove it before collecting samples.

- Wear the latex gloves while collecting the samples to avoid sample contamination.

- DO NOT RINSE OUT ANY OF THE SAMPLE BOTTLES, as they contain sample preservatives in powder form.

- To collect all samples, reduce the flow from the tap to a slow but steady stream, about the diameter of a pencil.

For all sample bottles, fill from a steady stream about the diameter of a pencil. Fill to the neck of the bottle but not overflowing.

Entry Point Sampling

- The entry point(s) is sampled after treatment.

- The large kit containing four one-liter (quart) bottles and two 250-milliliter (8 ounce) bottles is used for entry point sampling. Verify that you have the correct kit for the specified entry point. If you are sampling more than one entry point, open one kit at a time and completely finish the sampling procedure before moving on to the next kit.

- Start with the two bottles color-coded with a **red dot**. Remove each of these bottles from the kit, write the sample date and your initials on the bottle label, and fill to the neck but not overflowing.

- Cap the bottle tightly and agitate the sample until all of the sample preservatives are dissolved. Repeat for the other bottle.

For all sample bottles: After filling, tightly cap the bottle and agitate until all the preservatives are dissolved.

- Uncap each filled red-dot bottle in order to add 1:1 HCl. **(Caution: Handle the acid carefully. Wear the safety glasses and latex gloves.)** Open one plastic vial of acid and pour the entire contents into one of the bottles. Recap the bottle tightly and agitate briefly.

After filling, an entire vial of dilute HCl acid must be added to each of the two sample bottles coded with a red dot. Be sure to wear gloves and safety glasses.

- Repeat the process to add acid to the other red-dot bottle. Return the bottles to the kit. While still wearing the safety glasses, carefully re-cap and dispose of the vials. Return the safety glasses to their slot in the kit.

- For all the remaining bottles in the kit, no acid is added. Write the sample date and your initials on the bottle labels, and fill to the neck without overflowing. Cap each bottle tightly, and agitate until the sample preservatives are dissolved. Return the bottles to the kit.

Distribution Point Sampling

- The small kit containing two one-liter bottles is used for sampling the maximum residence point in your distribution system. Verify that you have the correct kit for the distribution point. Keep the sample bottles in the kit as you travel to the location. Note that the sample bottles are color coded with a green dot to distinguish them from entry point sample bottles.

The distribution point sample kit contains two bottles color coded with green dots.

- Remove the aerator (if present) from the tap, let the water run for ten minutes, and then reduce the flow to the diameter of a pencil. Wearing latex gloves, collect the samples by filling each bottle to the neck but not overflowing. Cap the bottles tightly, agitate until the preservatives are dissolved, and return the sample bottles to the kit.

- Return without delay to your facility. Samples must either be chilled promptly or packed immediately for shipping. If your distribution point involves considerable travel distance, it may be necessary to bring along a picnic cooler with ice to chill the samples. (See the section: Chilling the Samples.)

Chilling the Samples

- If the weather or sample water temperature is warm the samples should be chilled prior to shipping. If samples are received at the l laboratory too warm, you will be required to re-sample. In general, chill the samples for 2-3 hours, preferably in a refrigerator, if the temperature of the samples or the outdoor air temperature is expected to exceed 60 degrees F.

During warm weather, samples need to be chilled for 2-3 hours before shipping.

- If a refrigerator is not available, samples may be chilled in a picnic cooler with cubed or crushed ice. Take extreme care to prevent the sample bottles from cracking or breaking. Gently surround the bottles with ice, close the cooler lid, and avoid moving the cooler once the bottles are in it. DO NOT use the ice packs included in the sample kit to chill the samples. The ice packs need to be kept in a freezer until the samples are packed for shipment.

Packing the Cooler for Shipping

- If samples have been chilled, return them to the designated openings inside the cooler approximately one hour prior to your FedEx pick-up (or your delivery of the samples to a FedEx shipping agent). **BE CERTAIN** that the correct sample bottles are returned to each kit. Refer to the kit number on the bottle labels and on the kit label.

IMPORTANT! If you have chilled the samples and you have more than one sample point, it is essential that the correct bottles are returned to each kit.

- For each kit, place two of the completely frozen freeze packs in the slots along the sides of the cooler. Place the top foam insert in position (grey side down) and place the remaining freeze packs in the spaces provided in the insert. Place the lid on the cooler.

Return all freeze packs to their original locations inside all kits.

- One kit at a time, remove the Sample Tracking Form, the FedEx air bill, the Kit Checklist and the shipping tape from the plastic zip-lock document bag.

- Fill in all required information on the Sample Tracking Form including sampling date, and sampler's name. Check the appropriate box indicating what disinfectant residuals are present at this sample point. Seal the Sample Tracking Form in the document bag.

The completely filled out Sample Tracking Form is sealed inside the zip-lock document bag.

- Refer to the Kit Checklist (Column #2) to make sure that all necessary items are re-packed in the cooler. Dispose of any items not listed in Column #2.

- Place the document bag containing the completed Sample Tracking Form on top of the cooler. Pull the plastic bag up around the cooler, and fold down the top of the bag.

Fold down the top of the plastic bag on top of the document bag and cooler lid.

- Close the cardboard box and seal it with the shipping tape provided.

Seal the box with the shipping tape. Use all the tape strips provided to insure the closure is secure.

- Remove the backing from the new FedEx label and affix it to the box directly over the old label on top of the box. Ignore the "Deliver by" date in the lower right hand corner of the label.

Remove the backing from the FedEx label and place it directly over the old label on the top of the box.

- Keep the sample kits in a cool place until your FedEx pick-up or until you deliver them to a FedEx shipping location. Be sure the kits are shipped the SAME DAY as the samples are collected. (Note: If your only FedEx pick-up is early in the morning, call GLEC for special instructions.)

Now that you have completely
read the instructions, if you have
any questions, call GLEC at
231-941-2230 and
ask for Erica Schneider,
John Bachman, or Patrick McCool.
Also, you can email at
ucmr2@glec.com

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Under contract with EPA, GLEC provides implementation & monitoring support for the UCMR2 program.

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